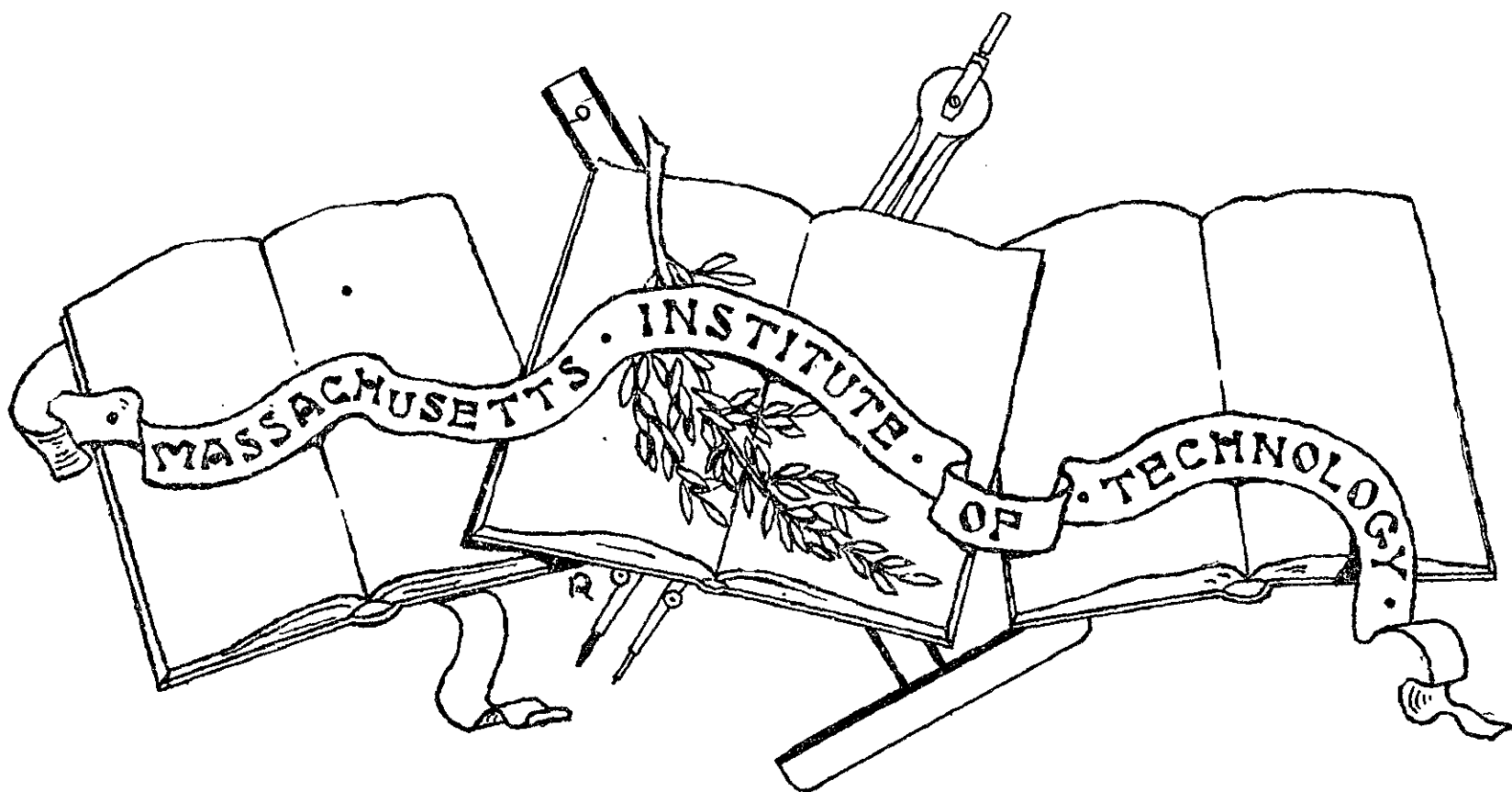
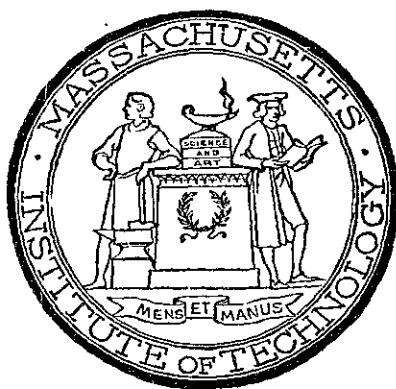




THE TECH



BOSTON, MASS.

VOLUME XVI.

NUMBER 22.

APRIL 1, 1897.



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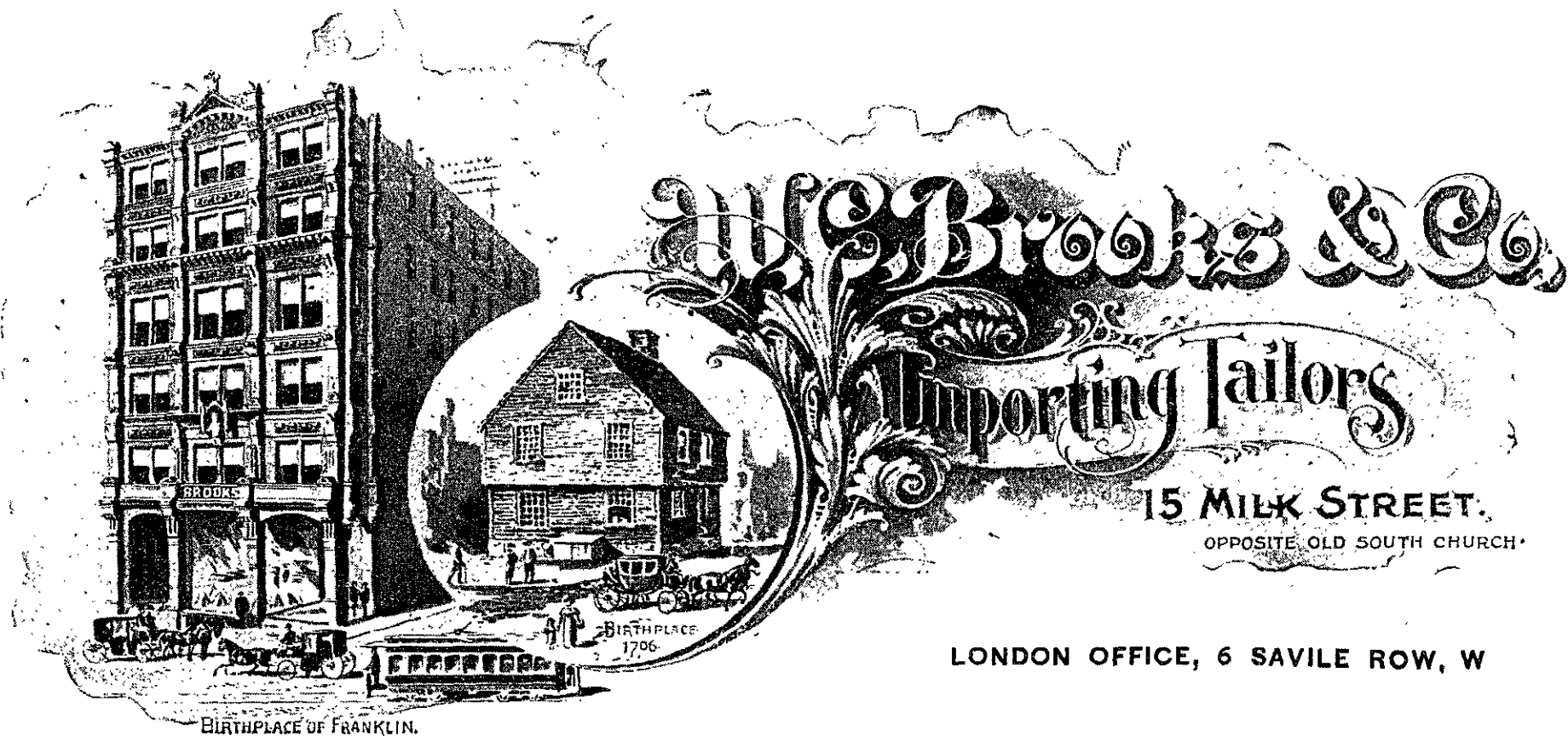
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For the benefit of students THE TECH will be pleased to answer all questions and obtain all possible information pertaining to any department of the College.

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A FLATTERING proof of the appreciation felt in outside circles of the high quality of the work done by the students of our Engineering Laboratory is given by the number of plants which have been offered to Professor Miller for testing. For several years it has been the custom, in order to give the men a better idea of actual working conditions, to obtain permission to conduct a test upon some large boiler and engine equipment. So good a reputation has been gained from the care with which these have always been conducted, and the success which has attended them, that already during the present year Professor Miller has been offered one pumping plant and two electric plants for this purpose, the companies being willing to pay the entire expense, which is no inconsiderable amount. It has not yet been definitely decided, however, whether any outside work will be done this year, as it may be considered advisable to substitute in its place a

Hirn's Analysis—that is, an investigation of the heat losses from various causes—on the Allis engine in the laboratory.

DURING the past decade or two, methods of gymnastic training, especially for schools, have been undergoing a radical and important change. The valuable but tedious dumb-bell and other drills have therefore been supplemented, and to some extent replaced by “gymnastic games.” This has been especially true in Germany, where games in the open air and under the guidance of an experienced teacher are a daily feature in the public schools.

In order to arouse a general interest in this phase of physical education the local branch of the American Society for the Advancement of Physical Education on Saturday, March 27th, held an exhibition of gymnastic games in the Drill Hall of the English High School. Over a thousand persons were present. Twenty-four out of a multitude of different games were presented by representatives of thirteen different gymnasiums. They varied in character from the grotesque “rider ball” of the boys' class of the Roxbury Turnverein, and the graceful “weaving” of the Brighton High School girls to the well-contested game of battle ball, in which Technology defeated Harvard, as related in another column.

This matter of gymnastic training is bound to become of greater importance at the Institute with the appointment of the committee of students and alumni to consider it. The proposed physical and medical examination is something of which all students will be glad to avail themselves, and the ultimate effect of such a stimulation of pure gymnastics cannot but be to improve the status of competitive athletics as well.

ALTHOUGH the Intercollegiate meeting seems a long way ahead, yet training for this spring can hardly begin too early, and a general call for candidates for the team will doubtless soon be made.

A suggestion is offered in regard to the training this year. Heretofore the track captain has had the entire coaching of all departments in track and field athletics. This, of course, throws altogether too much work upon one man, and is more than he can easily do. Each department should have an assistant at its head who should have full charge of it (of course subject to the supervision of the captain), thus making the training much more systematic.

The sprinters should be coached by one man, the jumpers by another, and the weight throwers by a third, and so on.

Another matter which we should like to urge upon the athletic management is the advisability of holding informal preliminary meets to encourage new men, and awaken enthusiasm among the students at large. Such meetings are being held at Williams and Bowdoin, and proved very helpful at Technology two years ago. We feel sure that if managed with the vim which characterizes the present athletic leaders, they would be most successful to-day.

Foreign Technical Schools.

BEFORE the Society of Arts on Thursday evening, March 25, Professor C. P. Brooks, Director of the Lowell Textile School of Lowell, Mass., read a paper on "Technical Education in Europe." He attributes the remarkable commercial growth of Germany, in particular, to the introduction of technical schools; including in this term not only the higher technical universities, but also the many trade schools for artisans.

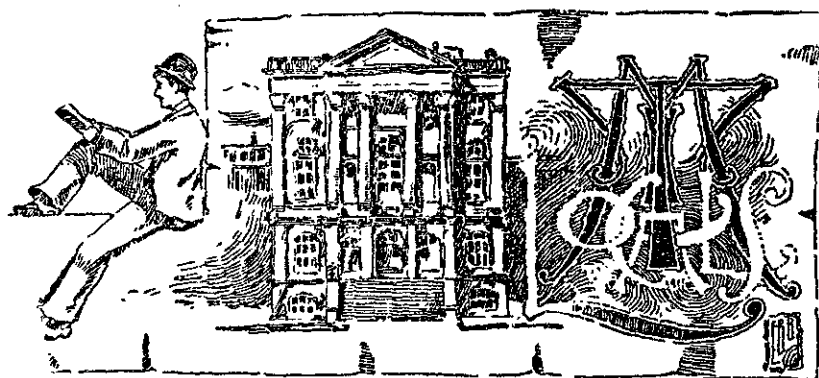
He says: "While the relations of the European nations during the last twenty-five years have been nominally those of peace, as

a matter of fact there has been in existence a continuous war; not a contest for military or naval supremacy nor contention for territory, but a struggle for wealth and for the control of the commerce of the world.

"In the course of this constantly raging industrial war, Germany has been the aggressor, and England and France on their defense; one of the latter nations protecting her world-wide trade in high grade, substantially made, and yet cheap goods, and the other her tastefully designed manufactures. All through the contest, the honors have rested with Germany, and many of her merchants will be ready to admit that the key to the success has been in the fact of the inception of technical education and its introduction on a practical basis in Germany before it was adopted by any other country, and in the immense sums that have been spent by states, cities and manufacturers in high grade trade schools and trade instruction, and that they depend for continued success on the extension and elaboration of their present system."

Of the five classes of so called technical schools, the fifth, which is the most important, in Professor Brooks' estimation, but not the most numerous, consists of the higher trade schools for specific trades. Such schools are generally located in districts where the subjects taught are practically applied in factories in close proximity to the school. Thus, a textile school would be located in a textile manufacturing center, a ship building school at a seaport, etc. Manufacturers have begun to realize the value of these schools in training their employees to the extent that they not only regard a certificate of graduation from a trade school as a fair recommendation, but in some cases they have also established trade schools in connection with their manufacturing plants.

TICKETS for the Technology play will be put on sale in Rogers corridor on and after Friday, April 2d.



"Technique" will come out on Thursday of Junior week, April 22d.

The Glee Club gave a concert at the Technology Club on Saturday evening, March 27th.

The membership of the Tennis Association is limited to sixty. Any who wish to join should apply to C. B. Gillson, '99.

Blossom, Course I., '98, who was at the Institute last term is now employed in the United States Geological Survey, in Idaho.

A fire occurred Saturday morning in Dr. Noyes' private laboratory. Prodigies of courage were performed by many of the Junior chemists, who helped to extinguish it.

Captain Bigelow has received word from Captain Robinson, Professor of Military Science at Harvard, that it will be impossible for his battalion to enter the competitive drill.

Mr. E. P. Mason, '97, will talk on Monte Carlo at the meeting of L'Avenir to-morrow, and will illustrate his reminiscences of that interesting resort by some practical experiments with cards.

The third year students in Steam Boilers are now using a new book on the subject by Professors Miller and Peabody. The book contains many improvements over the one formerly used.

The Home Concert will this year be a missing feature of Junior Week, as it is impossible to get Huntington Hall for either of the evenings not taken up by the Junior Prom., or by the Walker Club Plays.

The Institute Committee last week appointed H. W. Allen, '97, and C.-E. A. Winslow, '98,

as the undergraduate members of the Committee, to consider the needs of the Institute with regard to physical training.

Another letter has been received on the subject of Mr. Alland's speech at the '98 dinner, but the editors have decided not to devote any more space to the matter, which appears to have been sufficiently discussed.

The attention of students is called to the exhibition of fine art photographs and pictures in Room 42. They are the property of Mr. Sumner, and are used by him in the course on the Renaissance Period. The collection is unusually complete, and the pictures exhibited are frequently changed.

1900 (selling dinner tickets): Hullo! Going to the dinner?

'99: What?

'00: Aren't you going to the Class Dinner?

'99: But—

'00: Oh! I-I-er-I beg your pardon (mutual embarrassment).

Last week the "Technique" Electoral Committee finished its work by the election of Messrs. Robinson and Corse as Statisticians, Mr. Hammond as Society Editor, and Mr. Blake as Athletic Editor. The Board will select the artistic staff by competition, after which the Editor in Chief will be chosen.

The line of Technology jewelry which is on exhibition on the general bulletin in Rogers corridor, is attracting considerable attention. It includes, in addition to the regulation pin, such articles as hat pins, sleeve buttons, scarf pins, match boxes, pencil holders, and watch charms, each article bearing a facsimile of the pin properly proportioned to its size.

As a result of the competitive drill, on March 25th, the following men have been selected to represent Tech. on May 21st: In the Manual and Firings F. E. Foye, W. L. Weeden, C. T. Leeds, L. Arnold and L. H. Turner; substitutes of whom one will be added to the regu-

lar list, G. H. Leach, R. P. Priest and G. E. Russell. In the Bayonet Exercise H. M. Flanders, F. E. Foye, G. H. Leach, R. P. Priest, L. H. Turner, and G. E. Russell; substitute, R. H. Bolster.

In the Department of Electrical Engineering the special course of lectures on the Transmission of Power by Various Methods has begun. Professor Schwamb, who has just finished his portion of the course, treated of belting, shafting and rope transmission. Professor Peabody will discuss the transmission of power by compressed air, and Professor Porter hydraulic transmission. These lectures upon the mechanical methods will be followed by a discussion of the principles and applications of electrical transmission by Professor Puffer and Professor Louis Bell. Professor Clifford has also begun his lectures on the Electromagnetic Theory of Light to advanced students.

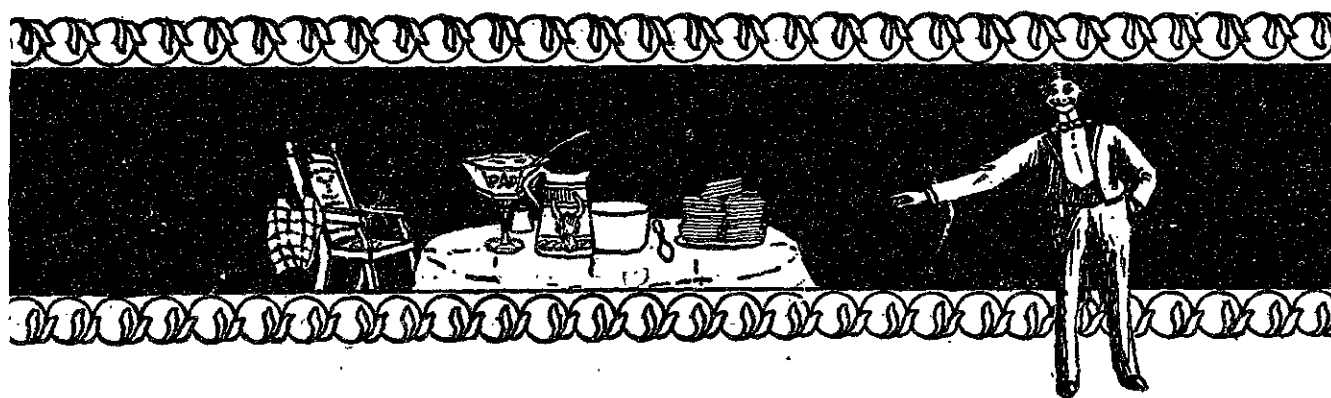
The following mentions have been announced by Professor Despradelle in the recent architectural problems for the Junior and Senior classes. In the Junior frontispiece design, the entrance of an important technical school, those who received the mentions were, Firsts: 1st, Richmond; 2d, G. P. Stevens; 3d, Schroeder; 4th, W. W. Stevens; 5th, Whitten; 6th, Keene; 7th, A. H. Tucker; 8th, Everett. Seconds: 1st, Little. Thirds: 1st, G. L. Smith; 2d, Mathews; 3d, House. The Junior mentions in the Sketch problem, "An Ornamental Fountain for the Intersection of two Streets," are: G. P. Stevens, Richmond, Miss Ryan, Miss Crane, Tallmadge, Mathews. The Senior mentions in the same problem are: Holmes, Dodge, Hoit, Seaver, Hering, Cutler, Jackson, Bradley, Rooke. The Fifth-year mention in the same problem is R. C. Henry.

Apparatus has recently been added to the machine shop which will enable classes to do their annealing and tempering without the inconvenience of going into the forging room. By its means, moreover, not only will better

work be done, but it will be done in one-tenth of the time, and a proportionate saving of the labor formerly required. It consists of a 12 inch by 6 inch diameter gas furnace with lead bath, a 13 inch by 8 inch by 3½ inch gas oven, and a No. 1 rotary high pressure blower, with a capacity of 450 cubic inches at 200 revolutions per minute,—all from the American Gas Furnace Co. The blower furnishes pressure to the ovens through a two inch blast, the gas, which is ordinary illuminating gas, being fed from a ½ inch pipe. The ovens will be used for hardening all kinds of cast steel, lathe tools, taps, drills, reamers, cutters, etc., and for drawing tools to exact tempers. By means of the blast very accurate regulation of temperature may be obtained, while the great advantage of the ovens, and of the lead bath in particular, over the ordinary forge, is that the temperature is very nearly uniform throughout, a point hardly to be overestimated. The apparatus has already been tested and found to work with great success.

Electrical Engineering Society.

LAST Monday afternoon the members of the Electrical Engineering Society enjoyed another of the many pleasant outings which President Dougherty has arranged from time to time throughout the past year. The trip this time was to the works of the General Electric Company at Lynn, which are of especial interest, both from the diverse character of the work carried on and also from the scale upon which the various operations are performed. The party left the Walker Building shortly after 1 o'clock, and spent several hours at the works, where, under the guidance of several officials, they visited all of the various departments. Every consideration was shown them, and pains were taken to point out interesting features. When the various parties into which the men had separated, had again united, a hearty Technology cheer was given, and all started for home, arriving in Boston about 5.30.



The Freshman Dinner.

FORTY-FIVE members of the Freshman Class met at Young's Hotel on the evening of March 27th to enjoy their first Class Dinner. The menus were tied with the class colors and ornamented with an appropriate drawing by Mr. S. W. Jones, which represented two jolly companions regaling themselves from a flagon of ale, with the inscription, "Come, make merry, for this is ye Feast Day of ye 1900 Class."

After an excellent dinner, President Cooper spoke a few words of greeting, and then introduced the toastmaster, Mr. C. M. Leonard, who fulfilled his duties admirably, presenting each speaker with appropriate remarks.

In response to the first toast, "The Cane Rush," Mr. J. H. Batcheller discussed the history of the event at Technology and similar customs which obtain at some other colleges.

Mr. S. Badlam next spoke on "The Competitive Drill." He recited the past achievements of Technology in this line, and said that no class has had more hope of winning new laurels than the Class of 1900.

Mr. Ziegler sang a selection from "Jack and the Beanstalk" and was twice encored.

"Our Class," was President Cooper's theme.

Mr. Cooper enumerated the things that the class has done and is going to do, and urged the necessity of class organization.

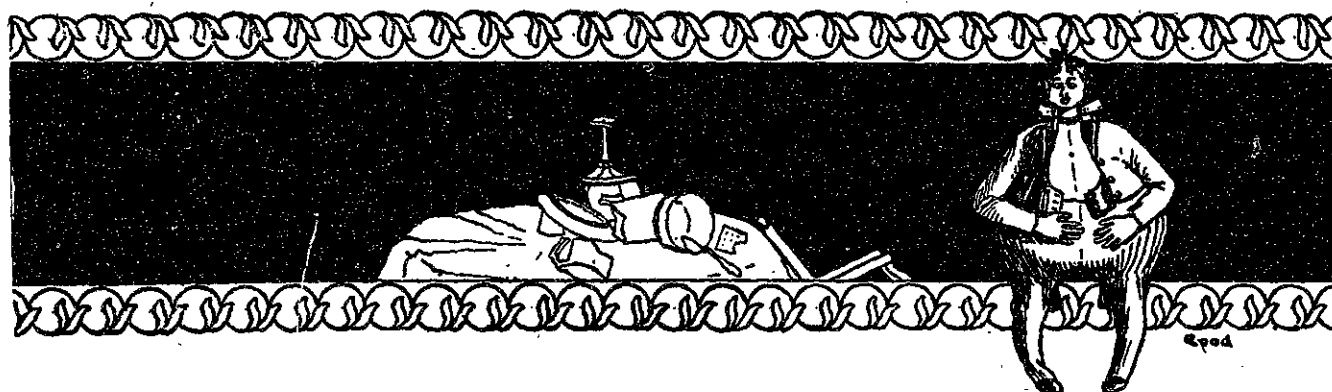
Mr. P. R. Brooks next rendered several fine mandolin solos, accompanied by Mr. M. W. Hall on the guitar. Mr. Hall's toast, "Glittering Generalities," followed and developed into a series of amusing sketches of the different officers of the class.

Mr. M. Davenport gave an account of the Tech. Orchestra. He also urged a generous financial support for the 1900 Baseball Team.

Mr. S. W. Jones gave an interesting talk on past "Technique" illustrations, and on the importance of developing the artistic element in the class.

After a banjeaurine solo by Mr. Hall, the last toast of the evening was proposed, "The Co-eds at Tech." Mr. Schneller treated the subject in a serious and lofty vein that provoked much applause.

Mr. S. H. Crittenden and Mr. M. Silverman both spoke of the Walker Club Plays, and Mr. Hall said a word about the Musical Clubs, and a cheer for 1900 and another for Technology ended the first dinner of the Freshman Class.



Typical Theses.**COURSE XI.**

[An Investigation of the Sewage Discharge from Moon Island and its influence on the waters of Boston Harbor. By E. P. Osgood.]

It is proposed to study by bacteriological, and to some extent by chemical methods, the fate of the sewage daily discharged at Moon Island, and to investigate its effects, if any, upon the character of the waters of the harbor and vicinity.

The method of procedure will be to take samples, first of the sewage as it flows from the outfall and then from various points near and remote in the harbor. These samples will be examined bacteriologically and chemically, the number and character of the bacteria being carefully considered.

It is hoped also to make some examination of the muds at different points by microscopical methods such as have been used by English experts in their study of the pollution of the river Thames.

Another question that may come up is the effect of cold salt water on the bacteria of fresh and relatively warm sewage. The briny character of sea water may have some such effect upon sewage bacteria as it has upon fresh-water fishes. The low temperature is pretty certain to have a powerful effect, for it is well known that "warm-blooded" bacteria, such as inhabit the human intestine, cannot thrive at a low temperature.

A local question to be considered is the alleged pollution of the shores near Moon Island. There is said to have been some complaint from Quincy and other places on this score and the justice of these complaints will be investigated.

Some study will probably also have to be made of the normal bacterial condition of ordinary sea-water, of which but little is known; and this may involve trips to points as distant as Boston Light, or the Light Ship, or even Provincetown.

The thesis deals with a novel and difficult

subject and it is puzzling to attempt to tell in advance all of the steps which may have to be taken.

The Baseball Outlook.

NINETY-NINE has about twenty-five candidates out practicing under the direction of Captain Lane Johnson. The following men are trying for the battery: for pitcher, H. M. Keys, R. G. Holabird, and T. P. Robinson; for catcher, G. A. Pennock, G. M. Gale, G. I. Copp, and F. L. H. Kimball. The following schedule has been arranged by the manager, W. O. Adams, who has also secured the use of the B. A. A. Oval for team practice.

April 13, Somerville High, at Somerville.

April 17, Brookline High, at Brookline.

April 19, Arlington High, at Arlington.

April 24, South Framingham.

April 29, Tufts College, Second Nine.

May 1, Williston Seminary, at Easthampton.

May 18, Class game with M. I. T., '00.

The management is in correspondence with Brown, '99, Thayer Academy, and several other schools with whom games will probably be arranged.

The Freshmen feel very confident of a successful season. Some fifteen or twenty men are already in the field. C. B. Cotting, who captains the team, was last year captain of the Newton High School nine. The management is in the hands of J. W. Paget, captain of last fall's football team. The candidates for pitcher are M. H. Whitehouse, Captain Cotting, M. Silverman, and W. E. Rabbeth; for catcher, C. M. Leonard and H. D. Learned. The following games have been arranged:—

April 10, Brookline High

April 14, Roxbury Latin.

April 16, Adams Academy.

April 21, Newton High.

April 29, Tufts Freshmen.

May 1, Bridgewater Normal.

May 5, Groton High.

May 10, Harvard Freshmen.

May 12, Thayer Academy.

May 15, Brown Freshmen.

May 18, Class game, M. I. T., '99.

May 22, Dean Academy.



'82. The work on the New York Episcopal Cathedral is being rapidly pushed forward by the architects, Heins & La Farge (Geo. L. Heins, Course IV., '82).

'93. C. W. Taintor, Course VI., who, since his graduation, has been in the employment of the New England Telephone Company, and later in that of the West End Street Railway Company of Boston, has lately started upon a trip around the world. Mr. Taintor intends to travel for a year or more.

Among the many men who have studied at Technology without directing their efforts along one of our prescribed courses was David Leonard Barnes. The eminent success of his life merits the attention of our alumni and undergraduates. A Rhode Island man, born in Smithfield, in 1858, he studied at Brown University for two years, from '76 to '78, then came to Technology for one year. This comprised his education for the engineering profession which he took up. Considerable of his time was spent with the Hinckley, and also the Rhode Island Locomotive Works, in which places he extended many courtesies to our students in Mechanical Engineering. His greatest success was as a Consulting Engineer, and in this capacity he was connected with many of the most important engineering undertakings of the day, among which were the Alley Elevated Railway, of Chicago, and the London Central Subway Railway. Besides his connection with the *Railway Review* he was Mechanical Editor of the *Railroad Gazette* up to the time of his death. He was a member of no less than eight engineering societies, before all of which he has presented noted papers. He wrote two books on Locomotives.



I. K. Baxter, of Trinity College, jumped 5 feet 11½ inches in the recent Trinity games. This is 2 inches better than the New England Intercollegiate record.

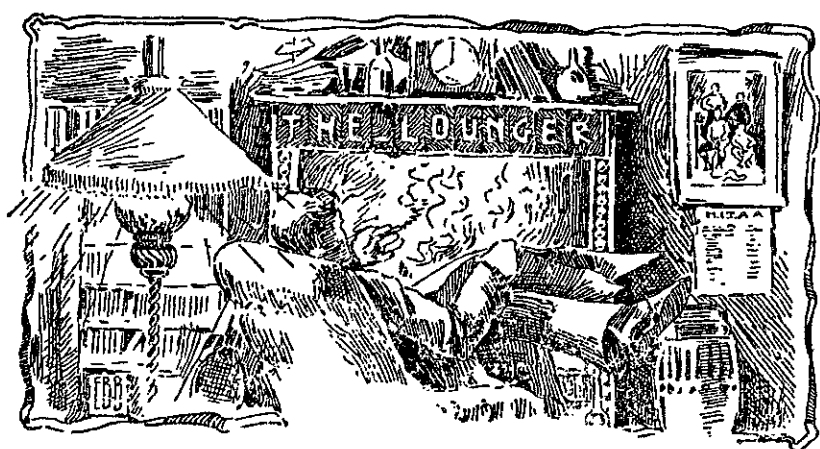
The 1900 Baseball team has secured the use of Irvington Oval on Monday, Wednesday, and Friday afternoons. Ninety-nine practices there on other afternoons.

Course I., '98, has organized a baseball team which will soon be in a position to meet the teams organized in several of the other courses. Mr. Delano was elected captain.

The '99 Track team have appeared in very neat running suits, consisting of blue pants with gold strip and a white shirt crossed by a blue ribbon, bearing the Class numeral in gold. The following men are on the team: Lathrop, Dryer, Burch, Morse, H. Sawyer, Ferguson, Kimball, Copp, and West.

Battle Ball.

THE game entitled "battle ball," recently introduced in our Gymnasium by Mr. Boos, became popular so rapidly that Mr. Boos was able to pick an excellent team, and made bold to challenge Harvard's long-established team. The challenge was accepted, and the teams met last Saturday afternoon in the English High School Drill Hall. After playing two halves of ten and five minutes, the contest was decided by a score of 76 points for M. I. T., to Harvard's 50 points. The Technology team was particularly strong in hard throwing and quick team work. It was made up as follows: G. I. Copp, '99, right guard; M. F. Delano, '98, center guard; H. M. McMaster, 1900, right thrower; D. Mayer, '98, left thrower.



At this advanced period of the year it is presumed that the aniline brightness of the Freshman will have become somewhat dimmed, and that if he still cherishes the follies of childhood, they will be concealed, and not displayed to an amused world with naive ingenuousness. The force of association with older men, the precepts of the Lounger, and the sobering influences of the semies have all tended to eradicate the deadly aroma of the prep. school, and the advent of the Class dinner should certainly mark a distinct advance in *savoir faire*. Nevertheless it was the Lounger's fortune to witness a scene last week which showed conclusively that on some youthful persons all these good forces have hitherto acted in vain. The two members of the Class of 1900 referred to were pitching pennies upon the classic steps of Rogers: they wore knowing slouch hats, and their hardened and desperate demeanor seemed to say, "We are tough as they make 'em, by thunder!" The Lounger was strongly tempted to take them by the hand and say, "My dear boys, you know this performance really does not stamp you as the sporty college man. Neither would it do so if you were to play marbles for keeps, or pick up old cigar stubs and smoke them. The only way to be a man is to wait and grow up; and meanwhile do play your games behind the Gym., or where they need not attract the attention of the world at large."

The Lounger is desolated at the news that the lunch room has lost one of its—Princesses, if the pun may be forgiven. (He wishes to say in passing that he hopes his puns may be blotted out of the record book by the tears of his guardian angel, just like the oath of somebody in some book. The puns certainly would be amply competent to make an angel weep.) The Lounger sorrows deeply, not only on account of the bother of training a new handmaid to understand his

various whims and fancies, but also for the loss of one who was deft as she was fair. He believes a certain Biological Instructor with literary leanings will sorrow also.

The influence of Technology in broadening the mind and quickening the inventive faculties can scarcely be overestimated. This aphorism is apropos of the janitor's boy. The present specimen of this interesting genus bade fair at first to revolutionize all the traditions of his office. The Lounger remembers distinctly the severe shock he experienced on observing the unsophisticated youth during his first week in office doing some work or other. A technical training, however, has now had its usual effect. Recently it was necessary to transfer some light cane chairs from the corridor of Rogers to Huntington Hall. Most people in this dilemma would have carried the chairs upstairs. Not so the astute Janitor's Boy. Amid a circle of interested and admiring spectators he leaned over the balcony and fished for the chairs with a large iron hook at the end of a rope. Presumably it was necessary for him to descend at frequent intervals and arrange the chairs within range of the apparatus; but this did not seriously detract from the general ingenuity of the idea. If some more convenient method of attachment than a hook could be devised the contrivance might with profit be applied to passenger traffic. The Freshman artist and the Course IX. men would be grateful for such assistance, no doubt, and the one or two weighty Profs. who might test too severely the tensile strength of a rope reside always on the lower floor and basement of Rogers, and would not, therefore, make use of it.

Technology has gone committee mad this year; and all sorts of august and ornamental bodies have sprung up to set the times to right. Of course the Institute Committee we have always with us; the "Technique" Electoral Committee and the Prom. Committee are mitigated evils. But we have also had the Cane-Rush Arbitration Committee. And now comes a non-descript Committee on Physical Training. These respectable bodies as a rule confine themselves to issuing pronunciamientos couched in learned phrases with much whereasness and circumlocution. The Lounger strongly advises this youngest body to depart from the precedents, to purchase a hammer and a few dozen nails, and to go down and do what needs to be done at the Gym. themselves without further flow of oratory.

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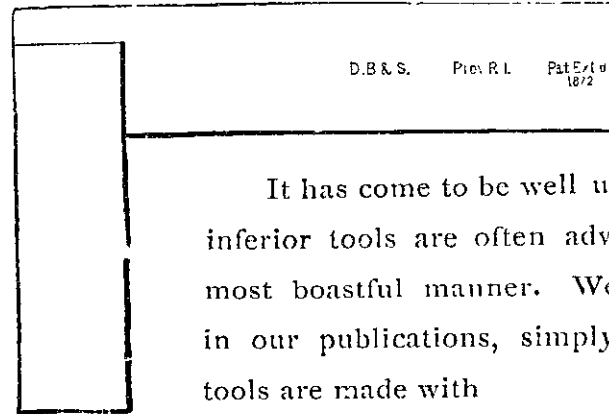
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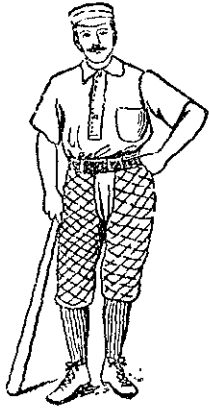
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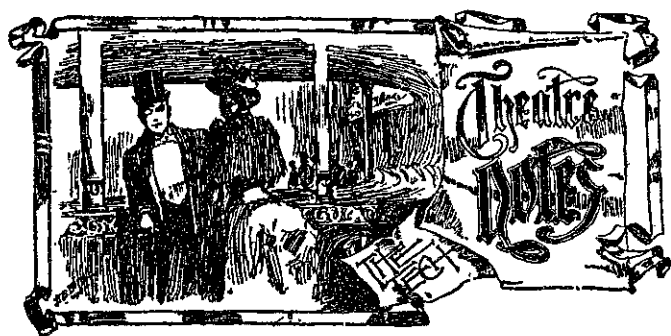
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Hollis Street Theatre.—Julia Marlowe and Robert Taber will begin their annual engagement at the Hollis Theatre April 5th. They will present “For Bonnie Prince Charlie” during the first week. The play was a great success in New York, and this popular couple will receive a rousing welcome from all Boston.

Tremont Theatre.—“The Two Little Vagrants” continues to attract large audiences to the

Tremont Theatre. The play has the elements of popularity, and is full of exciting scenes and situations. Jessie Busley and Minnie Dupree are worth going far to see in their charming impersonations of the ragamuffin heroes.

Castle Square Theatre.—The patrons of Castle Square Opera House will be delighted with the announcement of the popular “Chimes of Normandy” for April 5th. Of all the operas this remarkable company have produced this is the greatest favorite, full of fascinating musical gems and rare opportunities for good acting, and good choruses; and one feels sure of being always charmingly entertained.

Boston Theatre.—“Lost, Strayed or Stolen” will be produced at the Boston Theatre April 5th, with original cast and scenery. The play is a gay musical reflex of Parisian life.

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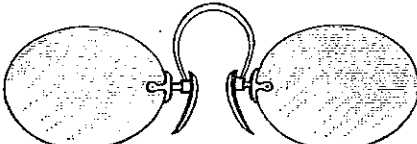
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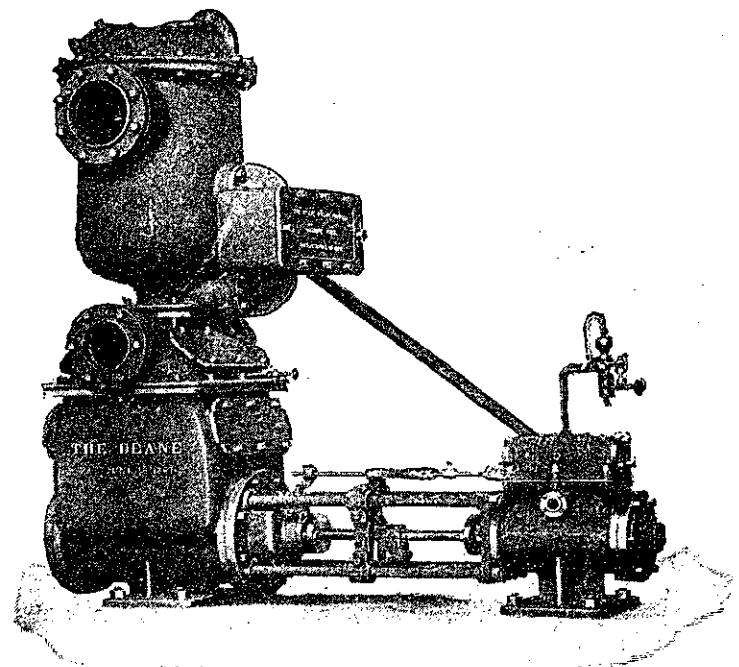
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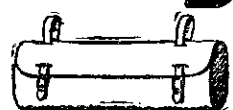
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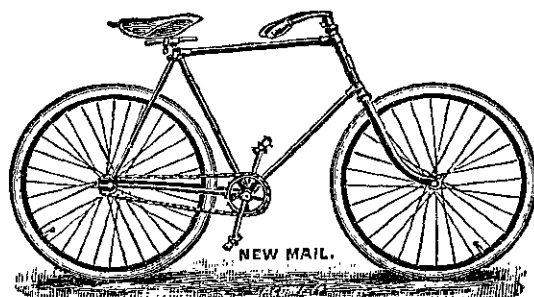
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